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CALIFORNIA STATE BOARD OF HEALTH*

WITH COMMENTS ON ITS ACTIVITIES DURING THE LAST TWO YEARS

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FROM time immemorial the prevailing political framework and philosophy of the particular period have controlled the public health activities. While the preventive practices of the Egyptians were guided by superstition and magic, those outlined by Hippocrates were dissociated from religion, and were rational. Application of the scientific method, reliance on the inherent physiological faculties of the body to predispose to disease and to resist it, inductive logic and an understanding of social and moral values were the beginnings of modern preventive medicine. Public medical service and sanitation, as practiced by the medical officers of ancient Rome, reflect in every respect the modern concept of public health—the protection of the people against environmental influences which may exercise a detrimental effect upon their physical or mental being. These officers of health were not only engaged in military service, in sanitation and in epidemiological duties, but were responsible for the planning of towns, the building of houses and the treatment of the poor.

THE EVOLUTION OF MODERN PUBLIC HEALTH

Modern public health, evolved through a great deal of organization, is certainly not the product of present-day science, irrespective of the fact that its greatest triumph during the past hundred years is based on the science of sanitation. Public health is more than sewage disposal, water purification, food inspection, and quarantine. These functions, assumed today by certain organizations, are merely a *means to an end;* in fact, *it is only the end that is public health itself.* Thus, public health remains a strictly social and essentially philanthropic field, which is imposed upon every medical and dental practitioner, as vaguely defined as the ethics by which he guides his professional conduct. If medicine is to progress, it must carry out its work of public health; and since ultimately the physician remains the social arbitrator between men and their environment, it is impossible to separate preventive from curative medicine, or preventive from restorative dentistry. Provided some of the insidious attempts at a separation of preventive from curative medicine are not stopped, the time may arrive at which the health department is reduced to that of sanitary police, while the health-promoting functions are carried on by the non-medical welfare agencies. The close cooperation of the patient and physician, which is essentially a social aspect of medicine, is just as important as sanitation itself. It is this side which has to be preserved and strengthened. By tradition, medicine is a social calling, not a business, nor even a science.

THE PUBLIC'S VIEWPOINT OF MEDICINE

In the eyes of the public, medicine is synonymous with social duty. The exponent of medicine will only acquire prestige provided he or she is willing to assume the social obligations inherent to the profession. That prestige is indispensable, for the display of the various measures of public health is a recognized fact. It is apparent that the general practitioner, and even the specialist, has failed as a public health worker, largely on account of the decline of his prestige. The socially minded quack may attract more people than the well-trained practitioner. Poor observers have attributed this change to the public. There is no proof that the public has changed, but the highly technically equipped physician has become less and less socially minded and, therefore, less able to carry out the function of public health. On the other hand, there is little convincing evidence that the medical officer in public health, on account of his official status, is in a better position. Ulti-

* From the Office of the President of the California State Board of Health.

mately, the social problems of medicine are solved by intimate social contact between patient and doctor, and not by an abstract official relationship. The strength and success of a health department depend entirely on the social mindedness of its own staff, and also the prestige of the medical practitioners of the community or the state in which the unit operates. A close interrelation between the Public Health Department and the practitioner of medicine must be maintained and continuously encouraged. In this connection, it is obviously imperative that the privileges and prerogatives of the practitioner of medicine must be preserved with respect to the services to be rendered.

THE STATE HEALTH DEPARTMENT AND HEALTH INSURANCE

At a time when the subject of health insurance is before the legislature, and the desire among many physicians and lay organizations to have the poorer classes treated by practitioners of medicine who are to receive their compensation from the State or from corporations, the Department of Public Health is at the crossroads. The pertinent question, Shall all public medical and health work be done by the health department; in particular shall the State Board of Public Health venture into the treatment of disease? may have to be answered in the very near future. It has always been the aim of the Department to restrict its activities to the prevention of disease, to the diagnosis of doubtful or new infections, to the control of epidemics, and to the judicious education of the public. The director is duty bound to consult with the county and city health officer, and to provide such aid and counsel as may be required in the solution of the many diversified problems which constantly arise. Needless to emphasize, the effectiveness of this coöperation is vastly enhanced through the existence of full-time health units, managed by men adequately trained in public health matters. The Board advocates the development of full-time health departments. It is fully cognizant of the fact that one-half of the rural population has no public health service, and, furthermore, that public health has not attracted the best medical graduates, since the financial rewards are modest and openings not influenced by partisan politics are few.

THE BOARD OF HEALTH AND THE NEW SOCIAL ORDER

The growing concern for the unserved or poorly served—a new spirit of evangelism—which permeates the medical profession may in due course influence the policies and functions of the Board. May I assure you that any change of policy will always consider the prerogatives and the privileges of those who will be invited to render the new service! In this connection I also wish to remind you that the Board has assumed its function in an advisory capacity, a council which will bring together expert medical opinion and sound judgment in the administration of public health matters. The members of the Board, as practitioners of medicine, are fully cognizant of the fact that today men and women die prematurely from diseases which are controllable or preventable by methods already available. These methods are neither sanitation nor other impersonal methods, but they consist of a close coöperation of patient and physician. It is the belief of the Board that this social aspect can best be administered by the practicing physician under the guidance of a full-time health officer. The director of the department assumes this obligation, and he in turn is aided by the members of the Board who, as physicians, have the social contact and the prestige to interpret the needs of the public.

THE TRADITIONAL FUNCTION OF THE STATE BOARD OF HEALTH

Traditionally, the State health department has assumed the function of an agency to recommend improvements in public health sanitation. More and more this activity has been taken over by the local health departments or the civic organizations of the communities. The Board is, therefore, frequently called upon to decide whether or not the improvements recommended are desirable, practical, and economical. Obviously, it can only act judiciously, provided it has at its disposal sound information and has, through personal or written investigations, established contact with the problems involved.

RELATIONS OF THE STATE BOARD OF HEALTH TO ITS DIRECTOR

The advice which the Board can give its director depends entirely on the accuracy and completeness of the data available. A great deal hinges on the completeness of the data which deal with the registration of disease. It is a well-known fact that test canvasses, through house to house surveys, have shown a striking incompleteness of the morbidity records. In Illinois, for example, it was discovered that only 30 per cent of the poliomyelitis and 66 per cent of the smallpox cases had been reported. We should promote a wider appreciation of the axiom that every case of infectious disease is a public matter, and that the diagnosis of a disease is always a coöperative undertaking, and as such is a very important function of the State Board of Public Health. Through its ramified contacts with the profession, it can, in my judgment, perform this obligation to an admirable degree.

With the legislature reconvening on Monday, March 4, the members of this organization may be interested in a brief outline of the unusual demands made upon the health agencies of this State during the past two years.

Communicable disease control constitutes the foremost obligation of official health agencies. Organized effort on the part of health departments will reduce to the minimum such diseases as diphtheria, plague, rabies, smallpox, and typhoid fever. The health officers and the public health nurses, through their continuous contacts

with families, are able to educate the laity regarding measures which may reduce the seriousness of infections such as diphtheria, poliomyelitis, scarlet fever, measles, mumps, whooping-cough, and tuberculosis. They are in a position to emphasize the benefit to the patient of good medical care early in the course of the disease. The control of most of the communicable diseases rests with the local health departments—the responsibility is theirs, with the State Department in the background ready to lend assistance when needed and to keep them advised regarding the best procedures to follow.

BUBONIC PLAGUE IN CALIFORNIA

There are some exceptions, however. The control of plague in California is the responsibility of the State. In those areas of California where plague is endemic among the ground squirrels, continuous plague eradicative measures are carried on, and there must be no break in this program. During 1934 we were reminded that not only should plague-control operations be carried on in those areas known to be infected, but also that the State Department of Public Health should maintain sufficient personnel to survey other counties so as to determine the extent of plague infection in California.

In the fall of 1933 high mortality was observed among the ground squirrels in the Lynn Valley near Glenville, Kern County. The exact nature of the deaths was not recognized until 1934. During the months of March, April, May and June, thousands of ground squirrels succumbed to plague in an area covering parts of Kern and Tulare counties. This new focus is closely adjacent, and partly involves the Tule Indian Reservation. This plague epizoötic was of such virulence that the squirrel population of that area was soon practically eliminated by the infection itself. Plague infection had not been proved on the east side of the State prior to this, and as far as investigations have been completed the source of this newly infected area has not been determined. Through coöperation with the State Department of Agriculture the United States Biological Survey and the United States Forestry Service, as well as the Agricultural Commissioners, an extensive and effective squirrel eradication program has been executed within and surrounding the infected area. On account of the fact that this area is sparsely populated, and the infection occurred before the vacation season, only one human infection was brought to the attention of the Department. This ten-year-old boy suffered from a bacteriologically proved bubonic plague infection in June. He made a partial recovery, but died in October with signs of marasmus and secondary plague meningitis. This unique observation established for the first time in California the occurrence of chronic plague with all of the possibilities of human to human transmission through human fleas.

At the time this epizoötic among the ground squirrels in Tulare and Kern counties was under investigation another similar epizoötic among squirrels was reported in Modoc County. Even more disconcerting was the discovery that this was rodent plague among the Oregon squirrels and the brush rats in the vicinity of Alturas, Modoc County. The infection was particularly heavy in the Fandango Valley, near the Oregon border. We are at a loss to explain the origin of this focus. In this connection, however, it must be recalled that a fatal human case of bubonic plague was recognized at Lakeview, Oregon, during the month of May—two months before the outbreak at Alturas was established by this department. The State Department of Public Health, in coöperation with the United States Public Health Service, will conduct a thorough investigation of the extent of the infected area. The federal service will extend the investigation into Oregon and Nevada during the coming season, provided federal funds are available. Because of the rapidity with which plague may be transmitted through the squirrel and rat population, and because of the experience in California with both bubonic and pneumonic infections in man, plague eradication is an item requiring recognition in the health department's budget.

STATE BUREAU OF EPIDEMIOLOGY

The State Department of Public Health employs statistical methods for predicting epidemics of those diseases which are not included in the group controlled by man. During February, 1934, an epidemic of poliomyelitis was predicted for the summer. This epidemic was the most extensive ever recorded in California, but the mortality was the lowest. That 3,333 cases were reported may be due to a more complete understanding of the diagnosis of nonparalytic cases. The cases were milder than in some of the previous epidemics. All of the histories have not been tabulated, but we have reason to believe that a lower percentage of those cases having central nervous system involvement will have residual paralysis. It is interesting to note, however, that a higher percentage of the cases developed among persons of the older age groups. In the 1912 epidemic 78 per cent of the 531 cases reported were in children under eight years of age; in the 1930 epidemic 59.4 per cent of the 1,876 cases were in children under ten years, and last year 42.2 per cent of the 3,333 reported cases were under ten. Most unusual of all was the number of cases of poliomyelitis among physicians, nurses, and hospital attendants in those hospitals caring for poliomyelitis patients. This was observed in several counties, but no explanation can be offered at this time. Sixty-nine per cent of the total cases reported occurred in the southern part of the State. In the northern section those counties which, for the most part had relatively few cases in the 1930 epidemic, reported the majority of the cases. Toward the end of the year the disease was particularly prevalent in Kern County, and a small outbreak of high virulence occurred in the vicinity of Sacramento.

Typhoid fever is usually localized so that full-time local health departments are able to determine the source and bring the epidemic under control. However, during the fall of 1933, two hundred and twenty-two cases of typhoid fever were reported from three counties—Santa Barbara, Los Angeles, and San Diego. There were three separate epidemics of typhoid fever which started during the early part of November and terminated six weeks later. Undoubtedly, some food product which was contaminated was distributed to Santa Barbara, San Diego, and certain sections of Los Angeles County. The duration of the infection was definitely limited, and by the time the cases were considered a part of a tri-county epidemic the contributing source had disappeared and could not be located. The occurrence served as a warning, however, as to the possibility of such outbreaks appearing in widely separated areas due to a common food supply. It must be admitted that with the increased diversity in food handling it has become exceedingly difficult to trace with absolute certainty sources of typhoid infection. The lesson which we can draw from this tri-county epidemic stresses again the importance of initiating investigations early in the course of the epidemics. The State Department of Public Health is always prepared to place at the disposal of the physicians and health officers experts who are associated with this department.

BUREAU OF CHILD HYGIENE

The Bureau of Child Hygiene, which includes prenatal care, has been greatly handicapped by lack of funds. For a properly organized bureau, we should have a rural nursing service. This should consist of an adequate staff of nurses and additional supervising physicians. More county hospitals should develop facilities for prenatal care and for baby-health supervision. In view of the fact that one birth in seven occurred in county hospitals, it is quite evident that there is a large field for educational, medical and nursing work. In 1930, 17 per cent of births in California were among Mexicans, while 38 per cent of the infant mortality occurred in that race. This illustrates further the need for more educational work in prenatal, infant and maternal hygiene. The educational work of this bureau also includes imparting to mothers the value of early immunization against diphtheria and smallpox. The success of this phase of preventive medicine depends upon the coöperation between both official and non-official health agencies and the members of the medical profession. Those engaged in health education emphasize to the families the value of immunization, and the health departments should render immunization available for those not given the protection by the family physician.

Unfortunately, one must always be content with what is practicable, remembering that habits remain second nature, and that only a slow process of evolution will ultimately accomplish what is considered best.

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AMEBIASIS—IMPORTANT ASPECTS OF ITS TREATMENT*

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DISCUSSION *by John V. Barrow, M. D., Los Angeles; Herbert Gunn, M. D., San Francisco; William C. Boeck, M. D., Los Angeles.*

IN the treatment of any severe and/or therapy-resisting disease, necessitating the administration of potent and oftentimes toxic drugs, one must be watchful for an extra group of symptoms due, not to the disease, but to the toxic effects of the drug administered. Each time a new drug is introduced clinically there is also introduced the possibility of a new symptom-complex. In amebiasis, emetine, when used in excess or inadvisedly, may cause a condition similar to beri-beri, with special emphasis on the cardiac aspects. With the arsenicals and the halogenated oxyquinolin derivatives, toxic states may develop which further embarrass an already damaged system. Certain other drugs, particularly bismuth subnitrate, may produce untoward blood effects which could be avoided if other salts of bismuth were used. In amebiasis, as in other chronic disease states, it is a matter of selecting the least harmful, most effective therapeutic agent of several now available; and this choice depends chiefly upon good clinical judgment, aided by a knowledge of critical laboratory studies.

BASIS OF THERAPY

Considerable discussion has been devoted to the treatment of amebiasis based on the *in vitro* and *in vivo* effects of various drugs on the pathogenic ameba. Little attention has been paid, however, to the patient's response to the amebic infection, i. e., *the disease hazard;* and even less interest is shown in the systemic effects of the more important drugs now used in controlling the infection, i. e., *the therapeutic hazard.* It is this phase of the problem with which we are concerned in this discussion, i. e., *the response of the ameba-infected individual to present-day therapy.*

AMEBIASIS IN TEMPERATE CLIMATES

Amebiasis in temperate climates usually does not produce such severe symptoms as to require long-continued treatment with large amounts of toxic agents, except in resistant cases. It is more likely to be a state of chronic ill health, easily confused with other gastro-enteric infections, and capable of being diagnosed only when E. histolytica is demonstrated in the freshly-passed stool. Amebiasis affects chiefly the large bowel, although the liver also may be involved often, or perhaps always, to some degree. In the average patient the disease hazard is not great enough to justify an added therapeutic risk. We must weigh, then the amount of damage present, the duration

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